AMENDMENTS TO THE CLAIMS:

1. (Original) A method of coupling a qubit, said method comprising:

locating said qubit near a transmission line approximately at a location corresponding to a node at a predetermined frequency.

2. (Original) The method of claim 1, wherein said predetermined frequency comprises a basic operating frequency of said qubit.

3. (Currently amended) The method of claim 1, ~~further comprising:~~ wherein ~~providing~~ said transmission line ~~to be~~ is used for one of controlling said qubit and reading out a state of said qubit.

4. (Currently amended) The method of claim 1, wherein said predetermined frequency comprises a frequency F01 that is a frequency difference between a lowest energy state of said qubit and a second lowest energy state of said qubit.

5. (Original) The method of claim 1, wherein said node is located at a ¼ wavelength location away from an end of said at least one transmission line at said predetermined frequency.

6. (Original) The method of claim 1, wherein said node is generated by forming one of a shorted end on said at least one transmission line and an open end on said at least one transmission line.

7. (Original) The method of claim 1, wherein said at least one transmission line comprises a superconducting material.

8. (Original) The method of claim 1, wherein said at least one transmission line comprises one of a coplanar stripline and a microstrip line.

9. (Original) The method of claim 1, wherein said qubit comprises a current-biased qubit and said node comprises a current node.

10. (Original) The method of claim 1, wherein said qubit comprises a voltage-biased qubit and said node comprises a voltage node.

11. (Original) The method of claim 1, wherein an input impedance of said transmission line approximately matches an output impedance of a circuit that provides said one of controlling said qubit and reading out a state of said qubit.

12. (Original) The method of claim 1, further comprising:

adjusting a ratio of a size of said qubit to a length of said transmission line.

13. (Original) A circuit comprising:

a qubit having a basic operating frequency; and

at least one transmission line related to an operation of said qubit, wherein said qubit is located near said transmission line approximately at a node in a control parameter of said basic operating frequency.

14. (Original) The circuit of claim 13, wherein said basic operating frequency comprises a frequency F01 that is a frequency difference between a lowest energy state of said qubit and a second lowest energy state of said qubit.

15. (Original) The circuit of claim 13, wherein said node is located at a ¼ wavelength location away from an end of said at least one transmission line at said basic operating frequency.

16. (Original) The circuit of claim 13, wherein said node is generated by one of a shorted end on said at least one transmission line and an open end on said at least one transmission line.

17. (Original) The circuit of claim 13, wherein said at least one transmission line comprises a superconducting material.

18. (Original) The circuit of claim 13, wherein said at least one transmission line comprises one of a coplanar stripline and a microstrip line.

19. (Original) The circuit of claim 13, wherein said qubit comprises a current-biased qubit and said node comprises a current node.

20. (Original) The circuit of claim 13, wherein said qubit comprises a voltage-biased qubit and said node comprises a voltage node.

21. (Original) The circuit of claim 13, wherein an input impedance of said transmission line approximately matches an output impedance of a circuit that provides said one of controlling said qubit and reading out a state of said qubit.

22. (Original) The circuit of claim 13, further comprising:

one of a current source and a voltage source connected to said transmission line to provide one of a current and a voltage to bias said qubit.

23. (Original) A circuit comprising:

at least one qubit; and

means for coupling to said at least one qubit in a manner that minimizes a decoherence of said at least one qubit.

24. (Original) A method of forming a qubit circuit, said method comprising:

providing a transmission line to be used for one of controlling said qubit and reading out a state of said qubit; and

locating said qubit near said at least one transmission line approximately at a location corresponding to a node at a predetermined frequency related to a basic operation of said qubit.

25. (Original) A method of isolating a qubit from its environment, said method comprising:

locating said qubit at a location along a transmission line that minimizes a decoherence of said qubit.

26. (Original) The method of claim 25, wherein said location comprises a node at a characteristic frequency of said qubit.

27. (New) The method of claim 1, further comprising:

using a frequency different from said predetermined frequency for communicating with said qubit.